

REMARKS

Claims 54-64 are now pending in the Application. Claims 54-56 and 60-64 are rejected; claims 57-59 contain allowable subject matter but are objected to for depending upon a rejected main claim. An Amendment after Final filed June 30 was not entered.

With this reply, claim 54 is amended and new claims 74-77 is added. Upon entry of the amendments, claims 54-64 and 74 remain pending.

Support for the amendment to claim 54 is found in the original specification, for example in paragraph 7. Support for new claim 74 is found in the original specification, for example in original claim 24. Support for claims 75-77 is found in the specification as originally filed, and as discussed further below. Applicants respectfully request entry of the amendments.

REJECTIONS REPEATED

The rejections are repeated from the rejection mailed December 28, 2005, except for claims 58-59, which now depend from allowable claim 57. Accordingly, Applicants address the rejections found in the December 28 Office Action.

REJECTION UNDER 35 U.S.C. § 102

Claims 54-56 and 60-64 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Bonk reference (U.S. Patent No. 6,203,868). At section 4 of the Final Office Action, Bonk at col. 11 lines 11-28 is characterized as disclosing a blend of thermoplastic urethane and hydroxyl functional copolymer, and that the ethyl vinyl alcohol copolymer¹ is reacted with a chain extender. The reference at column 11, lines 48-62 is cited for the proposition that ethylene glycol is a chain extender. The Examiner agrees with Applicants' position that the chain extender of the Bonk reference disclosed at column 11 reacts with the polyester and polyisocyanate as a chain extender. However, the Examiner appears to take the position that even though the chain extender reacts with the isocyanate, that at least trace amounts would remain unreacted in the composition. As a result, the composition of Bonk would contain the three recited components of the claims, that is, thermoplastic urethane, hydroxyl functional copolymer, and a chain extender. In the Advisory Action, the Examiner takes the position that

¹ Applicants wish to clarify that the reference teaches that the thermoplastic urethane is made by reacting (a) polyester polyol, (b) chain extender, and (c) isocyanates. See Bonk, col. 11, lines 15-20. Their comments assume the Examiner intended to refer to this teaching of the reference.

“even one molecule of residual ethylene glycol reads on applicant’s claims”, so that the claims are inherently anticipated. Applicants respectfully traverse the rejection as applied to the amended claims and request reconsideration.

To constitute an anticipation of a product by its unwitting production in carrying out a prior process, the carrying out of the prior art process must always and necessarily produce that product. Glaxo v. Novopharm 34 USPQ2d 1565,1567 (Fed Cir 1994). To establish inherency, the missing feature must be recognized by a person of skill in the art as necessarily present in the thing described in the reference. In re Robertson 49 USPQ2d 1949,1950-1951 (Fed. Cir. 1994). The mere fact that it may result from a given set of circumstances is insufficient to prove anticipation. In re Rijkaert (Fed. Cir. 1993). Prior art production in miniscule, undetectable amounts does not constitute anticipation of a composition. In re Seaborg 140 USPQ 662,664 (CCPA 1964).

A thermoplastic polyurethane made by reacting isocyanates, polyol, and chain extender such as ethylene glycol as described in column 11 of Bonk would contain less than even a trace amount of ethylene glycol. This is well known because of the high reactivity of ethylene glycol toward isocyanates during synthesis of the polyurethane. The person of skill in the art would thus recognize that such a thermoplastic polyurethane would contain essentially no residual ethylene glycol. Under the circumstances, it cannot be said that the feature missing from the reference (i.e., the presence of a gel reducing additive such as ethylene glycol) would be recognized as necessarily present in the prior art. And even if the person of skill conceded that at least a few molecules would be found in the composition, the undetectable amount would not anticipate under the principles of the Seaborg case. For this reason, Applicants respectfully submit that the reference does not anticipate the claim as originally filed.

In the interest of advancing prosecution, Applicants have amended claim 54 to further distinguish the claim subject matter from that of the reference. The amended claim recites that the composite contains at least one flexible layer, and that the flexible layer is made of a low gel sheet formed from a composition that comprises the three ingredients (i.e., thermoplastic polyurethane, hydroxyl functional copolymer, and a gel reducing additive).

The Bonk reference is clear in its teaching that its flexible layers are formed from a blend of thermoplastic polyurethane and hydroxyl functional copolymer. As discussed above, the blend would contain no chain extender. In amended claim 54, the gel reducing additive is a

positively recited component of a three component mixture from which flexible layers are formed, for example, by extrusion (*See* for example, paragraphs 7 and 8 of the specification).

The Bonk reference does not disclose the low gel sheet of amended claim 54 explicitly, and a person of skill in the art would not recognize the missing feature as necessarily present. For all of these reasons, Applicants respectfully request that the rejection under § 102 be withdrawn.

REJECTION UNDER 35 U.S.C. § 103

The rejection of claims 58 and 59 under 35 U.S.C. § 103(a) has been withdrawn, according to the Final Rejection, because the claims are amended to depend from allowable claim 57. Applicants appreciate that the rejection has been withdrawn.

DOUBLE PATENTING

Claims 54-56 and 58-64 are provisionally rejected on the grounds of obviousness-type double patenting in view of claims 28-54 of co-pending Application 10/633,764 in further view of the Bonk reference (U.S. Patent No. 6,203,868). Applicants respectfully traverse the rejection as applied to the amended claims and request reconsideration.

As noted in the Final Rejection, co-pending Application 10/633,764 does not recite the gel reducing agent of the claims. The deficiencies of the Bonk reference with respect to subject matter that contains the gel reducing agent is discussed above with respect to the § 102 rejection. Applicants respectfully submit that the Bonk reference does not make up for the deficiencies of the co-pending application as applied to the amended claims. Accordingly, Applicants respectfully request the rejection be withdrawn.

NEW CLAIMS 74-77

New claims 74-77 recite that the composition from which the flexible layer is formed contains 0.05 to 20% by weight of gel reducing agent. These claims further distinguish over the Bonk reference, which as discussed above discloses a composition containing no gel reducing agent, or at the most a small undetectable trace. It cannot be said that the Bonk reference discloses compositions containing 0.05% by weight of gel reducing agent or greater.

Support for claims 74 and 75 is found in the specification as originally filed, for example in paragraphs 50 and 65. Paragraph 65 discloses 0.05-5%, while paragraph 50 describes embodiments with "up to 20%". Such a disclosure also supports a limitation of 0.05 – 20%. See In re Wertheim. Likewise, Claims 76 and 77 recite minimum levels of 0.5% and 1%, supported in the spec for example in the Examples.

For these reasons, Applicants respectfully request that claims 74-77 be passed to a state of allowability.

CONCLUSION

For the reasons discussed above, Applicants believe that claims 54-64 and claims 74-77 are allowable over the art of record. The amendments and remarks have clarified the reasons why the claims are novel and non-obvious in view of the cited art. Accordingly, Applicants respectfully request entry of the amendments and passage of the claims to a state of allowability.

The Examiner is invited to telephone the undersigned if that would be helpful to resolving any issues.

Respectfully submitted,

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